

**MINUTES
CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE (CTCDC)
MEETING**

Los Angeles, March 13, 2003

The first CTCDC meeting of year 2003 was held in Los Angeles, on March 13, 2003.

Chairman Jim Larsen opened the meeting at 9:10 a.m. with the introduction of Committee members and guests. The following members, alternates and guests were in attendance:

ATTENDANCE	ORGANIZATION	TELEPHONE
Members (Voting)		
Jim Larsen Chairman	CA State Association of Counties County of Tulare	(559) 733-6291
John Fisher Vice Chairman	League of CA Cities City of Los Angeles	(213) 580-1189
Gerry Meis	Caltrans	(916) 654-4551
Farhad Mansourian	CA State Association of Counties Marin County	(415) 499-6570
Joe Vizarra (Alternate Member)	CHP	(916) 657-7222
Ed von Borstel City of Modesto	League of CA Cities	(209) 577-7222
Dwight Ku (Alternate Member)	California State Automobile Association	(415) 241-8904
Richard Backus	Auto Club of Southern California	(714) 885-2326

ALTERNATES	ORGANIZATION	TELEPHONE/E-Mail
Jacob Babico	CA State Association of Counties San Bernardino County	(909) 387-8186
Gian Aggarwal	League of CA Cities City of Vacaville	(707) 449-5349

ATTENDEES	ORGANIZATION	TELEPHONE/E-Mail
Sam	LA County DPW	(626) 3000-4704
Harry Parker	Consulting Traffic Engineer, Inc	(310) 827-7089
Michael Harrison	LightGuard System, INC	(707) 542-4547
Joe Dyer	City of Whittier	jdyer@whittierch.org
Alfredo Hernaandez	City of Whittier	ahernandez@whittierch.org
Wayne Tanda	City of LA, DOT	wtanda@dot.lacity.org
Warren Siecke	City of Brea	(714) 970-6247
Chris Dahl	City of Anaheim	cdhl@anaheim.net
John Lower	City of Anaheim	jlower@anaheim.net
Joe Otte	3M	(805) 907-9512
Dennis Anderson	3M	(909) 964-9512
Charng Chen	City of Inglewood	cchen@cityofinglewood.org
Bijan Vaziri	City of Beverly Hills	bvazirir@ci.beverly_hills.ca.us
Dale Johns	BlinkerStop Sign	(805) 541-5475
Jerry William	BinkerStop sign	(805) 878 2225
Joe Genovese	City of Oxnard	joe.genovese@ci.oxnard.ca.us

Minutes

Adoption of December 5, 2002 CTCDC meeting Minutes.

Motion: Moved by Dwight Ku, seconded by Gerry Meis, to adopt the minutes of the CTCDC meeting, held on December 5, 2002 in Oakland. Motion carried 8-0.

Public Comments

Chairman Larsen asked for any public comments related to items that will not be discussed as an agenda item.

Joe Genovese, Traffic Engineer, City of Oxnard, stated that there is a lack in the standard for the design of presignals/signals at railroad crossings. There is not enough information in the Federal Manual as well as in the State Traffic Manual. He asked the Committee to develop more friendly (in detail) standards for the State of California.

Gerry Meis responded that he believes Caltrans has some guidelines on signal systems near R/R crossings and he will check with Caltrans Headquarters Electrical Branch and provide information to Joe.

Warren Siecke, City of Brea, stated that they are working on a project, involving 9 intersections to install presignals next to the R/R crossings. The project was initiated as a supplemental safety measure and he would be glad to share the post results with the Committee and with Joe Genovese.

There were no other public comments.

Membership

Chairman Larsen presented a plaque to Mr. Wayne Tanda who has resigned from the CTCDC due to his new assignment as a General Manager with the Department of Transportation, City of Los Angeles. He thanked Wayne for his 10-year contribution to the profession of traffic engineering to promote uniformity in traffic control devices and in particular developing new traffic control devices for the State of California.

John Fisher, Vice Chairman, CTCDC, presented a plaque to Jim Larsen who has announced his retirement from the County of Tulare effective March 31, 2003. John thanked Mr. Larsen for his services to the Committee since 1998.

Jacob Babico, Alternate Member will replace Jim Larsen as a voting member and George Johnson, Riverside County, will be the alternate to Jacob Babico.

Agenda Items (Public Hearing)

03-1 Speed Feedback (Radar Speed) Sign

Chairman Larsen asked John Fisher to introduce this item.

John Fisher noted that the City of Whittier has requested approval from the Committee to conduct experimentation with the speed feedback sign. The Committee has approved similar experimentation during the previous meetings. John introduced Joe Dyer, City of Whittier, and asked him to address his request to the Committee.

Joe Dyer asked the Committee for permission to conduct an experiment using a speed feedback sign, a nonstandard traffic control device, to determine its effectiveness to reduce speed in school zones at 14 locations. The City has received a grant for this project from the Office of Traffic Safety. All the proposed locations are in the school zones. These permanent signs will offer state-of-the-art solutions to reduce the speed in school zones. The purpose is to slow down traffic in school zones. The City will submit before and after data to the Committee.

Chairman Larsen noted that the City of Garden Grove and the County of Mendocino have received authorization to conduct experimentation with the speed feedback sign.

Gerry Meis inquired about the verbiage proposed on the speed feedback sign in Revision 2 of the MUTCD, and asked whether the City of Whittier would consider waiting for the final verbiage.

Joe Dyer responded the City of Whittier had considered that option, but wasn't sure how long it will take FHWA to publish final verbiage in the MUTCD.

Matt Schmitz asked what type of message would be flashed back to the motorist, if a motorist was driving at a speed higher than that of the posted speed limit. He has seen red LEDs displayed on the radar speed signs.

Joe Dyer responded that the message would be flashed in yellow LEDs, not in red.

Joe Ottee, 3M, stated that there are two options available to display on the sign. One, when a motorist exceeds the speed limit, actual speed could be displayed in yellow LEDs or second, "slow now" message. The agencies can program the sign to go blank at a certain speed limit (above the speed limit), in the event a motorist wants to check his speed. The size of the sign is small and the commonly used message "slow down" would not fit in the panel.

Jacob Babico, Alternate Member, noted that the City of Whittier is using a combination of speed feedback sign and W63 sign (advance school symbol) with the school assembly C, which is a nonstandard setup. He doubts if the experiment will be adequate using the nonstandard setup.

John Fisher asked Joe Dyer, City of Whittier, if he could explain Jacob's concern.

Joe Dyer stated that he personally does not like the setup. Rather, he would prefer the speed feedback sign to be installed on a separate post, down stream of the school speed limit sign (School Assembly C).

John Fisher agreed and suggested that the speed feedback sign should be placed after the school speed limit sign.

Gian Aggarwal, Alternate Member, noted that a radar speed sign is an informational sign and in his opinion, it is not a traffic control device. He further added the speed feedback sign should be installed after the school speed limit sign.

Gerry Meis responded that the Committee has debated in past meetings, whether the speed feedback sign is a traffic control device or not. He added that Revision 2 of the MUTCD has included text on the radar speed sign as a traffic control device. Therefore, further discussion whether this is a traffic control device or not is a meaningless debate

Gian further asked whether a law enforcement agency could use this sign for citations.

Gerry responded, this question was raised at one of the previous CTCDC meetings. At that time, the California Highway Patrol representative stated that the sign could not be used for enforcement purposes, because a radar speed enforcement device must be calibrated after a certain number of days.

Chairman Larsen asked for other comments. There were none.

Motion: Moved by John Fisher, seconded by Farhad Mansourian, to authorize experimentation with "speed feedback" signs at the 14 school locations. The speed feedback sign is to be placed after the standard school speed limit sign. Motion carried 8-0.

Chairman Larsen suggested that the City of Whittier should consider applying with the FHWA for experimental approval.

99-18 Ground Mounted LED Lights On Stop Bars

Chairman Larsen noted that during the December 2002 CTCDC meeting, the Committee Secretary was asked to invite the City of Anaheim to attend this meeting and provide their experience with the LEDs on stop bars. He asked Gerry Meis to update the Committee on this item.

Gerry Meis introduced John Lower, Traffic and Transportation Manager, City of Anaheim.

John Lower informed the Committee that the experiment with LEDs at a stop bar was started in November of 1999. The before data for 14 months reported six minor accidents. There was a pattern in the accidents. Five out of six accidents occurred when southbound vehicles ran through a red light and two of those five accidents involved eastbound vehicles with the Disney Tram. There were numerous distractions to motorists around the intersection due to ongoing construction activities including the construction of a roller coaster. The City was looking for

ways to increase visibility of the intersection. After the installation of LEDs, the red light violation was reduced by 50%. The fifth and final report was submitted in June of 2002, which indicated a 75% reduction in red light runners. John Lower noted that the Committee had asked whether the City would pursue this experimentation at the national level. John said no, because Disney is not running the Tram any more through the intersection. The City has turned off the LEDs. The intersection now is a typical signalized intersection.

John further added that the cost of the installation of the LEDs is about \$50,000 and the operation of the LEDs required high maintenance attention. At a typical intersection, if there is an accident problem and the intersection meets minimum accidents warrant, he would prefer to consider traffic signals rather than LEDs. John introduced his maintenance supervisor, and asked the Committee if they had any questions related to the maintenance of the LEDs.

Gerry Meis thanked John Lower for sharing City's experience with the Committee and admired the city for the detailed study.

Chairman Larsen asked for other comments.

Mike Harrison, LightGuard, informed the Committee that there are several cities interested in installing LEDs at stop bars of signalized intersections to address red light running problems and they are approaching the FHWA for experimental approval. He added that the requesting agencies would keep CTCDC informed on the progress.

Note: During the December 2002 meeting the Committee recommended that all new requests should come to the Committee and the individuals should present their justification to the Committee for experimentation with LED's at the signalized intersections. The Committee further commented that they are not prepared to recommend this to be a traffic control device in California.

Action: Item completed.

00-9 Pedestrian Countdown Signal Heads

During the December 2002 meeting, the City of Stockton submitted a final report on the experiment with pedestrian countdown signal heads (PCSHs). The City also shared their experience on the PCSHs with the Committee and requested adoption of the PCSHs as a standard traffic control device in California.

Motion: Moved by Gerry Meis, seconded by Ed von Borstel, to accept the final report submitted on PCSHs by the City of Stockton and allow the City to continue use of the devices, until the Committee makes a final decision. Motion carried 8-0.

02-10 Pedestrian Countdown Signal Heads

Chairman Larsen noted that this item is a continuation from the last meeting and the purpose is to bring closure to the ongoing experiments. There are seven agencies that have approval from the Committee to experiment with PCSHs. The City of San Jose, the City of Stockton and the City of Fountain Valley have submitted final reports on the experimentation. The City of San

Francisco has submitted a partial study. Chairman Larsen noted that Revision 2 of the MUTCD has verbiage on the PCSHs. Should the Committee wait and adopt the MUTCD verbiage in California or should the Committee recommend different guidelines for California?

Farhad Mansourian stated that there are public agencies under the impression that this is an approved traffic control device and they have installed these countdown devices. He further added that there are vendors, who are telling cities that this is an approved traffic control device. He suggested the Committee might want to develop interim guidelines for these agencies to follow, if they choose to install countdown signals before the Committee makes a final decision.

John Fisher noted that the California Energy Commission and the California Office of Traffic Safety are making funds available for the innovative devices. Some of those devices are not standard and have not been approved for the use in California. He suggested having communication with these Offices and ask that they make sure the device or devices have been approved for the use in California. In addition, make them aware about the experimental process for nonstandard devices.

Gerry Meis commented that he agreed with Farhad's suggestion about having interim guidelines for California. Sometimes, the starting and ending of the numerals for the countdown signals are not consistent. He stressed that the Committee may want to consider guidelines which provide uniformity and consistency on the start/end of the numerals. Any deviation from the approved guidelines should be discussed with the Committee.

Chairman Larsen added that the agencies which received approval from the Committee were given the parameters for starting the countdown numerals.

John Fisher apprised the Committee about efforts at the national level to develop standards for the starting and ending for the countdown numerals. He added that the text proposed in Revision 2 of the MUTCD is adequate for the PCSHs.

Gerry Meis reiterated that the Committee might want to contact those agencies, which have installed PCSHs, and use their experience to develop interim guidelines as suggested earlier by Farhad. He further added that cities and counties should consider approval from the Committee to lessen their tort liabilities in the event of an incident.

Chairman Larsen asked Matt Schmitz, FHWA, if he could provide a timetable for the final ruling on Revision 2 of the MUTCD.

Matt Schmitz responded that he cannot give exact timing, but the fall of this year would be a good guess.

Warren Siecke stated that he has been in a similar situation as described by Farhad earlier. He had a hard time explaining to his City Council, why the City cannot install countdown signals without CTCDC approval, when they see neighboring cities having installed these signals. Warren added that one of the reasons he has not requested approval for experimentation is because the City does not have resources to collect the before and after data. He asked the Committee if agencies could be granted approval by simply writing a letter and not be required

to collect data. There are already a number of locations under the experimentation and the Committee would have enough data to make a final decision. All the experimental agencies were given the parameters to follow for installation of the PCSHs by the Committee and they would follow the same parameters.

John Fisher asked Warren whether the City has requested approval from the Committee to experiment.

Warren responded no, because the City does not have the resources to collect data.

Farhad offered to host a meeting to develop interim guidelines by involving the agencies that have completed the study including those that are still collecting data. An agency would follow those interim guidelines if they wish to install countdown signals. The agency should be able to get approval and they do not have to collect data. Farhad asked John Fisher to attend that meeting and provide national dialogue to the participants.

John Fisher inquired whether the Committee could give approval to agencies for the installation of countdown signals by sending a letter to the agencies.

Dwight Ku inquired if there are provisions in the governing regulations to circulate a motion by e-mail or via telephone among Committee members to give approval or denial for a request to experiment to an agency between CTCDC meetings.

Gerry Meis responded that in the past, he has consulted with Caltrans Legal Division about authorizing an agency to install in-roadway warning lights at the crosswalks, after the Committee had made recommendations that Caltrans adopt the device in California.

The Committee discussed simplifying the approval process for agencies wishing to install countdown signals and not have them collect before and after data, because there are a number of agencies collecting data on the device and some of them have already submitted final results.

Motion: Moved by Farhad Mansourian, seconded by Ed von Borstel, to authorize the CTCDC Chairman to approve a request for the experimentation for countdown signal heads as long as they comply with the guidelines approved for the experimenting agencies. The authorization is until such time that Caltrans adopts this device in California. The Chairman will bring those approvals as information items at CTCDC meetings. Motion carried 8-0.

Farhad Mansourian asked whether the Committee endorsed his idea to have consultations with agencies that have installed countdown signals to develop interim guidelines for PCSHs.

Chairman Larsen added that that would be an appropriate approach.

Gian Aggarwal, Alternate Member, noted that agencies are not consistent at the starting and ending of the numerals for the countdown signals. He suggested having guidelines, which provide uniformity and consistency for the countdown numerals.

Discussion Items

03-3 Establishment of Speed Limits on Unpaved Roads

Jacob Babico, Alternate Member informed the Committee that the County of San Bernardino maintained approximately 500 miles of unpaved roads. The County has received requests from private citizens to post speed-limit signs on the unpaved roads. He added that he has reviewed the California Vehicle Code (CVC), Traffic Manual, American Association of State Highway and Transportation Officials (AASHTO) and Manual on Uniform Traffic Control Devices (MUTCD) for information and found no reference as to how to establish speed limits on an unpaved road. Section 8.03-3 (B) Engineering and Traffic Survey of the State Traffic Manual provides guidelines on how to establish a speed limit on a paved road but does not provide any guidance for an unpaved road. AASHTO does have verbiage which states that dirt roads can be signed up to 40 mph.

Jacob further added that CVC Section 22365 gives authority to the Board of Supervisors to set a speed limit on certain roadways in the southern part of the State without following the procedures outlined in the Traffic Manual. CVC Section 22365 is as follows:

Prima Facie Speed Limit: South Coast Air Quality Management District:

Local Ordinances 22365. Notwithstanding any other provision of law, any county or city, which is contained, in whole or in part, within the South Coast Air Quality Management District, may, if the county or city determines that it is necessary to achieve or maintain state or federal ambient air quality standards for particulate matter, determine and declare by ordinance a prima facie speed limit that is lower than that which the county or city is otherwise permitted by this code to establish, for any unpaved road under the jurisdiction of the county or city and within the district. That declared prima facie speed limit shall be effective when appropriate signs giving notice thereof are erected along the road.

Jacob stated that the eastern part of San Bernardino County, where unpaved roads are located, is not covered under the "South Coast Air Quality Management District, CVC Section 22365."

The Committee members suggested that the Engineering and Traffic Survey, described in the Traffic Manual could be used for any type of roadways for setting a speed limit including the dirt roads.

Jacob asked if a speed limit is posted, based on an Engineering and Traffic Survey, what will be the outcome if the roadway is wet? Would not that open the door for tort liability in the event of an incident?

Committee members suggested that this also should apply for paved roads. In that type of situation "basic speed law" CVC Section 22350 applies.

22350. No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of, the highway, and in no event at a speed, which endangers the safety of persons or property.

Joe Vizarra, Committee member representing the CHP, stated that CVC Section 22350 is applicable when a motorist is driving at a speed which is unsafe for the conditions. The law enforcement agency can cite a motorist under this section, even though the speed is less than the posted speed limit.

The Committee members agreed that the Engineering and Traffic Survey described in the Traffic Manual can be used to post a speed limit on any type of roadway under normal conditions. And, for unusual conditions CVC Section 22350 applies.

03-2 National Weather Services Signing (Tsunami)

Chairman Larsen asked Gerry Meis to introduce this item.

Gerry gave a brief background on the Tsunami sign. He apprised the Committee that the City of Crescent and the National Oceanic and Atmospheric Administration (NOAA) have requested installation of Tsunami signage on State Highways to guide the public in case of evacuation due to a Tsunami. The graphics of the sign are included in the agenda packet. This type of sign has been installed in the State of Oregon. The NOAA has plans to install this type of sign along the West Coast. The MUTCD has a section which addresses evacuation signage. Gerry introduced Tim McClung of the NOAA to the Committee.

Tim briefed the Committee about the purpose of the signage. He cited the following:

1. Reason for the Signs
 1. Historic threat of tsunamis along the California coast, as well as the entire Pacific Coast.
 2. The National Oceanic and Atmospheric Administration is funding tsunami mitigation efforts.
 3. Part of this effort is tsunami inundation area mapping. Much of the California coast is already mapped, including the most densely populated areas.
 4. With the hazard area known, communities can mark the hazard area with signs.
 5. Communities can establish evacuation routes from the hazard area and mark these with signs.
2. Why These Signs.
 1. The signs were developed by the Oregon Department of Transportation for use in Oregon.
 2. The signs were also approved for use in Washington, Alaska, and Hawaii.
 3. These signs have been posted on city streets in Crescent City, California.
 4. The signs are easily obtained from the ODOT Sign shop in Salem, Oregon.

3. Benefits From California Adoption of the Signs
 1. Uniformity of tsunami hazard signs along the entire United States Pacific Coast.
 2. Community tsunami hazard plans will greatly benefit from having hazard zones and evacuation routes. During a tsunami emergency the public will know if they are in the hazard zone and by what route they should leave.
 3. Similar concept to hurricane evacuation plans along the Atlantic and Gulf coasts.
4. Description of Signs
 1. Tsunami Hazard Zone
 1. Sign Background - blue, reflective
 2. Sign Legend - white, reflective
 3. Sizes - 15" x 12", 22½ x 18", 30" x 24"
 2. Tsunami Evacuation Route
 1. Sign Background - blue, reflective
 2. Sign Legend - white, reflective
 3. Sizes - 12", 18", 24"

All the signs would have supplemental arrow boards for the direction to follow.

John Fisher noted that NOAA is a federal agency, therefore they should work with the FHWA to develop a standard sign which could be used nationwide.

Matt Schmitz noted that the proposed sign is a symbol, which is not consistent to the MUTCD signage for emergency evacuation purposes. Matt stated that he would work with Tim and with their Washington Office to develop a sign that could be used nationwide.

Tim agreed with Matt's suggestion and will make contact with Matt.

Informational Items

99-11 MUTCD Adoption By Caltrans

Gerry Meis briefed the Committee and the audience on the progress of the MUTCD adoption in California along with the California Supplement. There will be a number of workshops in the near future to address the Committee's comments.

The draft text for Part 4 – Highway Traffic Signals is posted on the MUTCD Supplement web site and is now open for public comment. The following is the web site address for the California Supplement to the MUTCD.

<http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/>

The following draft texts have been completed and submitted to the CTCDC for review. These parts will be discussed in an upcoming CTCDC workshop before being posted on the web site and made available to the public for comment.

Part 1 – General, Part 5 – Traffic Control Devices for Low-Volume Roads, Part 8 – Traffic Controls for Highway-Rail Grade Crossings and Part 10 - Traffic Controls for Highway-Light Rail Transit Grade Crossings.

The following draft texts are currently being prepared and will be submitted to the CTCDC for review by the end of March 2003:

Part 7 – Traffic Controls for School Areas, and Part 9 – Traffic Controls for Bicycle Facilities.

The following draft texts are currently being prepared and will be submitted to the CTCDC for review by the end of each month as identified below:

April 2003 Part 3 – Markings.

May 2003 Part 6 – Temporary Traffic Control.

June 2003 Part 2 – Signs.

The following is a suggested format for the CTCDC workshops. CTCDC will finalize schedule and location for the workshops.

Workshop # 1 – Parts 1, 5, 7, 8, 9 and 10. Estimated duration 1 day.

Workshop # 2 – Part 3 and 6. Estimated duration 1 – 2 days.

Workshop # 3 – Part 2. Estimated duration 2 days.

Workshop # 1 would depend upon the comments. If there are not enough controversial issues then the comments could be addressed through e-mail.

00-1 Bicycle Pavement Markings

Chairman Larsen introduced Mia Birk, Alta Planning & design, to address the Committee on this item.

Mia informed the Committee that their firm is working for the City of San Francisco on evaluating the shared bike lane marking and to collect before and after data on the experiment which was approved by the Committee. She distributed a handout to the Committee members. In the agenda packet, information was provided about the methodology on study procedures and the collection of before and after data. Mia added that she will not go over that but she will discuss the status of the project.

Mia stated that the purpose of the study is to determine the effectiveness of bicyclist markings. The bicyclists are required by the California Vehicle Code (CVC) to ride as close to the right of the roadway as practical. Due to the parking, the City of San Francisco has a very high bicyclist incident rate. The City of San Francisco, Denver and a number of other cities have used a variation of bicycle markings. A few examples are included in the handout, which are used in Paris, Australia, Portland, San Francisco and Denver. The goal of the study is to inform motorists and bicyclists of the appropriate location for bicyclists to ride on a roadway without bike lanes, reduce aggressive behavior of motorists, correct bicyclist-riding behavior and improve safety. Also, the intent of markings is to inform motorists to expect bicyclists on the roadway and inform motorists that bicyclists may ride further to the left in the travel lane.

Mia stated that four streets were chosen for the study and all four have on-street parking. Two of them are two-lane with on-street parking, wide curb lane and moderate to heavy ADT. The

other two are four-lane with on-street parking, narrow curb lane, moderate to heavy ADT. The before study will include videotaping for three days at two locations per street to capture both directions of travel in early April 2003. Videotaping will be either the peak commute hours of a.m. or p.m. After the arrows are placed the same process of videotaping will take place. After one month there will be another videotaping that will show if there is a change from the first videotaping. We will be looking at a variety of factors in terms of motorist's and bicyclist's behavior. The incident data may also be analyzed, if the markers are kept long enough to get post incident data.

Mia noted that in terms of selection of the pavement markings a survey was conducted to determine which markings are understandable to bicyclists. The bicyclists were not able to understand clearly the message of the marking shown on the cover page of the handout. After a lengthy discussion with the technical advisory Committee established by the City of San Francisco, the marking shown on page 8 was picked. The arrow has been elongated, the cyclist enlarged, and a bike wheel channel created at the bottom to encourage cyclists to ride on the arrow. The before and after study will also focus on whether bicyclists understand the purpose of the markings. If the marking itself is a problem the study will indicate that to. Mia closed her presentation and asked the Committee members for any questions they may have.

Gerry Meis asked whether the City is considering or already has approval from the FHWA. He strongly suggested that the City should get FHWA approval to experiment and that will be helpful in keeping uniformity at the national level.

Mia responded that the City of San Francisco and the City of Denver are jointly planning or already have applied with the FHWA for experimental approval.

Jacob Babico, Alternate Member, stated that the presentation was very good. He noted that the Caltrans Traffic Manual and Highway Design Manual have classified three types of bikeways. This proposal fits in the Class III bikeway route. There are signing procedures for Class III bikeways. Does this proposal fit in that category?

Mia responded that signing would be optional and signs would apply in special situations. They may not apply on the cross street which has no on-street parking or very low volume. The signs are intended for special conditions such as high traffic volumes.

John Fisher asked whether the signs would be installed on streets planned for bicyclist markings when these streets are be classified as Class III bikeway routes.

Mia responded that she has to check on that.

John further asked if the City had tried to using an edge line to delineate bike paths.

Mia responded the City has tried edge lines but they were removed because they did not work.

Chairman Larsen asked if it would be possible to show a videotape to the Committee. Mia responded that they would be able to finish the videotaping before the next CTCDC meeting and a short edited version could be shown to the Committee during the next CTCDC meeting.

01-12 BlinkerStop Sign

Chairman Larsen asked Gerry Meis whether he would like to give an update on the BlinkerStop sign experiment or is there a representative from BlinkerStop to provide the update.

Gerry introduced Dale Jones from BlinkerStop.

Dale used a Power Point presentation to brief the Committee on the ongoing experiment with BlinkerStop sign. The Committee, during the September 2001 CTCDC meeting, approved experimentation with solar powered BlinkerStop sign. 27 BlinkerStop signs were installed at the high accident intersections by 14 participating agencies. Improvement to the LEDs has been made since the original LEDs BlinkerStop sign was developed. The improved BlinkerStop sign has brighter LEDs and also has automatic turndown ability. Dale added that the BlinkerStop sign has a larger target value than the flashing beacon. Signs were stolen from 8 locations. Since then an improvement has been made to minimize theft. The \$1500 cost per sign is less than the solar powered flashing beacon sign. The LEDs will run at full brightness for 72 hours with no solar power recharging. The flashing of the LEDs is consistent with the flashing beacon.

Dale stated that TAPCO would continue to assist agencies in the collection of after data. Before and after data will be compiled in the final report. Dale also stated that several of the experimenting agencies have written letters (included in your handout) indicating their satisfaction with the device. The average motorist can see the sign from at least a ½ mile distance.

Dale further added that the preliminary conclusion proved that BlinkerStop signs do not confuse motorists, long-term reliability has been confirmed, theft/vandalism has been identified and the installation assembly has been improved. TAPCO will replace any BlinkerStop sign stolen within one year, provided that it is installed with a metal and v-lock or helical anchor foundation. Dale informed the Committee that several agencies would like to install solar LED BlinkerStop signs at other high accident locations.

Gerry Meis responded that any new experimentation should be submitted by the requesting agency and the agency will be asked to follow both the federal and CTCDC processes.

Dale agreed with Gerry's suggestion and indicated that he will work with Matt Schmitz to follow the federal process.

John Fisher asked whether brighter LEDs signs have been installed in California. He further asked whether any of the locations under the ongoing experiment with LED signs would be compared with the standard flashing beacon.

Dale responded that brighter LEDs signs have not been used in California, it is used in Milwaukee. Dale added that when the experimentation was authorized during the September 2001 CTCDC meeting, the agencies indicated that it would be difficult to find a location with a standard flashing beacon sign for the comparison with the LED signs.

John Fisher asked Matt Schmitz, FHWA, whether the Committee should consider approval of the LED technology not only on stop signs, but also on other signs. Should the FHWA be consider permitting LEDs on warning and regulatory sign borders in general, especially where alternating current power is not available?

Matt responded that he is not aware of any colored LEDs within the sign panel or within the border of the sign, except the Stop/Slow paddle does have optional white LEDs in the sign panel to increase the conspicuity of a sign. The only other options are flashing beacons, which can be installed above or below of the sign panel, but not within the sign panel.

Gerry Meis inquired about the letter, which was included in the hand out, regarding approval from FHWA, requested by the Texas Transportation Institute (TTI).

Dale responded that TTI has received approval from the FHWA to experiment using LEDs on the stop sign.

Gerry further added one of his main concerns is how many LEDs are adequate for a sign, their shape, color etc. He would be more comfortable if FHWA takes the lead on this and can come up with a final decision.

Dale further asked if some agencies would like to install LED stop signs at high accident locations.

Gerry stated that he would ask any agency to follow FHWA's process and they should also include the CTCDC in the process. Gerry added that if a Caltrans District is interested in installing LED stop signs under experimentation, he would work with the District to get approval from FHWA, but the District would have to follow-up and complete the before and after study.

Chairman Larsen noted that this was an information item on the agenda and no action is required of the Committee.

Dale thanked the Committee and stated that he will approach FHWA for any new installations under experimentation.

Off the Agenda Item

Traffic Fines Doubled in School Zones

Gerry Meis told the Committee that the Legislature has passed a Law, AB 1826 (2002), Double Fine in School Zones for Alameda, Santa Barbara and Ventura Counties. These counties have called Caltrans to develop sign specifications and policy. In your Agenda packet, there are six alternatives A, B, C, D, E, and F. Two of these were suggested by Committee members. Caltrans would like the Committee's input in the development of the sign specs.

After a lengthy discussion Committee members narrowed their choice to the following two options.

“Traffic Fines Doubled In School Zone” (white on black) as a stand alone sign and “W63 sign with supplement “Traffic Fine Doubled”.

After reviewing the MUTCD 2000 for the school signing package, Caltrans decided to use the W63 with the supplement sign “Traffic Fine Doubled” (white on black).

Policy: SR59

The Traffic Fines Doubled sign (SR59) when use, shall be placed below a W63, School Advance Warning sign. It shall be used in specially posted school zones in Alameda, Santa Barbara and Ventura Counties or in a city in any of these counties as specified in CVC 42011. The sign shall remain in effect only until January 1, 2007, unless an enacted statue deletes or extends this date.

The sign specs are as follows:

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	
MUTCD NUMBER <u>None</u>	CODE <u>SR59</u>

SIGN SIZE (Inches)	DIMENSIONS (Inches)						
	A	B	C	D	E	F	G
30 x 30	30	1/2	3/4	4-1/2	5C	3	1-7/8
36 x 36	36	5/8	7/8	5	6C	4	2-1/4
48 x 48	48	3/4	1-1/4	7	8C	5	3

SIGN SIZE (mm)	DIMENSIONS (Millimeters)						
	A	B	C	D	E	F	G
762 x 762	762	13	19	114	125C	76	48
914 x 914	914	16	22	127	150C	102	57
1219 x 1219	1219	19	32	178	200C	127	76

COLORS
 BORDER & LEGEND - BLACK (Non-Reflective)
 BACKGROUND - WHITE (Reflective)

- THE POLICY FOR INTENDED USAGE OF THIS SIGN IS SHOWN ON REVERSE SIDE -

 CHIEF, OFFICE OF SIGNS AND DELINEATION	<u>3/19/03</u> DATE	REVISION	REVISION
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Next CTCDC Meeting

The next CTCDC meeting will be held on June 5, 2003 in Caltrans Office, at 1727 30th Street, Sacramento, CA 95816.

Adjourn

The meeting was adjourned at 2:30 p.m.